



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/680,677	10/07/2003	Robert A. Krol	2030874-0004	5432
53312	7590	09/01/2005	EXAMINER	
MCGUIREWOODS LLP c/o LUKE ANDERSON 1170 PEACHTREE STREET, NE SUITE 2100, THE PROSCENIUM ATLANTA, GA 30309			LEE, JINHEE J	
			ART UNIT	PAPER NUMBER
			2831	

DATE MAILED: 09/01/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/680,677	Applicant(s) KROL ET AL.	
	Examiner Jinhee J. Lee	Art Unit 2831	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) 19 is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-18 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>1003</u> . | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Election/Restrictions

1. Restriction to one of the following inventions is required under 35 U.S.C. 121:
 - I. Claims 1-18, drawn to a bushing, classified in class 174, subclass 137A.
 - II. Claim 19, drawn to a method for making a bushing, classified in class 29, subclass 596.

The inventions are distinct, each from the other because of the following reasons:

2. Inventions II and I are related as process of making and product made. The inventions are distinct if either or both of the following can be shown: (1) that the process as claimed can be used to make other and materially different product or (2) that the product as claimed can be made by another and materially different process (MPEP § 806.05(f)). In the instant case the bushing can be molded separately in pieces.
3. Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification, restriction for examination purposes as indicated is proper.
4. During a telephone conversation with Luke Anderson on 8/30/05 a provisional election was made without traverse to prosecute the invention of Group I, claims 1-18. Affirmation of this election must be made by applicant in replying to this Office action. Claim 19 is withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

5. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

Drawings

6. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference sign(s) not mentioned in the description:

Item 55.

A proposed drawing correction, corrected drawings, or amendment to the specification to add the reference sign(s) in the description, are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

7. Applicant is required to submit a proposed drawing correction in reply to this Office action. However, formal correction of the noted defect may be deferred until after the examiner has considered the proposed drawing correction. Failure to timely submit the proposed drawing correction will result in the abandonment of the application.

Claim Objections

8. Claims 7, 10, 15 and 18 are objected to because of the following informalities:

Claim 7 line 3, the phrase "said apparatus bushing" has an error. Examiner suggests "said bushing" instead to avoid insufficient antecedent rejection.

Claim 10 line 2, the phrase "a core" has a grammatical error. Examiner suggests "a core; " instead to correct the grammatical error.

Claim 15 line 3, the phrase "said foil matrix" has an error. Examiner suggests "a foil matrix" instead to avoid insufficient antecedent rejection.

Claim 18 line 4, the phrase "resign" has a spelling error. Examiner suggests "resin" instead to correct the error.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

9. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

10. Claims 1-4, 10-13 and 15 are rejected under 35 U.S.C. 102(b) as being anticipated by Wheeler (4505033).

Re claim 1, Wheeler discloses a bushing comprising: a core (19 for example); a flange (26) securely fastened to said core; and a housing (sheath 22 with 25 for example) permanently fastened directly to said core (see figure 7).

Re claim 2, Wheeler discloses a bushing wherein: said housing is one unitary piece (bonded, see column 8 lines 58-60 according to the numbering in the middle), having a top end and bottom end (see figures 5 and 7), and is permanently fastened directly to said core (bonded, see column 8 lines 58-60 according to the numbering in

the middle), continuously from the top of said housing to the bottom of said housing (see figures 5 and 7).

Re claim 3, Wheeler discloses a bushing wherein: said housing is comprised of silicone-rubber (silicone elastomer, see column 4 lines 53-54).

Re claim 4, Wheeler discloses a bushing wherein: said core consists of a stud (tube, 20) with resin-impregnated paper-foil matrix (21, see column 8 lines 14-18) wound around said stud for increased capacitance-grading (see column 8 lines 5-9).

Re claim 10, Wheeler discloses a bushing comprising: a core (19); a flange (26) adapted for receiving said core, where said flange is permanently bonded to said core (see column 8 lines 58-60); and a housing directly bonded to said core (see column 8 lines 58-60).

Re claim 11, Wheeler discloses a bushing wherein: said housing is of unitary construction, having a top end and a bottom end, and is permanently molded to said core (see figures 5 and 7 and column 8 lines 58-60).

Re claim 12, Wheeler discloses a bushing wherein: said housing is a rubber housing (see column 4 lines 53-54).

Re claim 13, Wheeler discloses a bushing wherein: said housing is comprised of silicone-rubber (see column 4 lines 53-54).

Re claim 15, Wheeler discloses a bushing wherein: a foil matrix is selected from a group consisting of a metal, a conductive ink, or a conductive element paper (see column 8 line 9).

Claim Rejections - 35 USC § 103

11. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

12. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

13. Claims 5, 6, 14 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wheeler in view of Priaroggia et al. (3828114).

Re claim 5, Wheeler discloses a bushing as set forth in claim 4 above with plurality of paper and foil matrix layers wound around said stud (see column 8 lines 44-45); and an epoxy resin encapsulating said plurality of paper and foil matrix layers (see column 8 lines 14-18). Wheeler does not explicitly disclose the paper being crepe paper. However, Priaroggia et al. teaches of a bushing with crepe paper wrapped around the stud (see column 3 lines 33-35). It would have been obvious to one having

Art Unit: 2831

ordinary skill in the art at the time the invention was made to use the crepe paper as taught by Priaroggia et al. on the bushing of Wheeler in order to provide covering.

Re claim 6, note that the device of Wheeler includes a foil matrix selected from a group consisting of a metal, a conductive ink, or a conductive element paper (see column 8 line 9).

Re claim 14, Wheeler discloses a bushing as set forth in claim 8 above with core comprised of a stud around which a plurality of resin impregnated paper and foil matrix layers are wound (see column 8 lines 44-45). Wheeler does not explicitly disclose the paper being crepe paper. However, Priaroggia et al. teaches of a bushing with crepe paper wrapped around the stud (see column 3 lines 33-35). It would have been obvious to one having ordinary skill in the art at the time the invention was made to use the crepe paper as taught by Priaroggia et al. on the bushing of Wheeler in order to provide covering.

Re claim 18, Wheeler discloses a bushing comprising: a core (19) for conducting and insulating electricity comprising a stud (20) and a plurality of paper and foil matrix layers (21) wound around said stud and impregnated with epoxy resin; a flange (26) securely fastened to said core; and a silicone-rubber housing (22, 25) of unitary construction, having a top and a bottom end; said silicon-rubber housing being permanently bonded directly to said core continuously from the top of said housing to the bottom of said housing (see column 8 lines 55-60). Wheeler does not explicitly disclose the paper being crepe paper. However, Priaroggia et al. teaches of a bushing with crepe paper wrapped around the stud (see column 3 lines 33-35). It would have

Art Unit: 2831

been obvious to one having ordinary skill in the art at the time the invention was made to use the crepe paper as taught by Priaroggia et al. on the bushing of Wheeler in order to provide covering.

14. Claims 7, 9 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wheeler in view of Cushing et al. (4123618).

Re claim 7, Wheeler discloses a bushing for conducting electricity as set forth in claim 1 above. Wheeler does not explicitly disclose the power factor test tap on the flange, and power factor test tap connected to core by an electrical wire. However, Cushing et al. teaches of a flange with a power factor test tap (see column 10 lines 32-36), and power factor test tap connected to core by an electrical wire (conducting stud 80 for example). It would have been obvious to one having ordinary skill in the art at the time the invention was made to use the power factor test tap connected to core by wire of Cushing et al. on the flange of Wheeler in order to make power factor test.

Re claim 9, Wheeler discloses an apparatus bushing as set forth in claim 8 above. Wheeler does not explicitly disclose the power factor test tap on the flange, and power factor test tap connected to core by an electrical wire. However, Cushing et al. teaches of a flange with a power factor test tap (see column 10 lines 32-36), and power factor test tap connected to core by an electrical wire (conducting stud 80 for example). It would have been obvious to one having ordinary skill in the art at the time the invention was made to use the power factor test tap connected to core by wire of Cushing et al. on the flange of Wheeler in order to make power factor test.

Re claim 17, Wheeler discloses an apparatus bushing as set forth in claim 8 above. Wheeler does not explicitly disclose the power factor test tap on the flange, and power factor test tap connected to core by an electrical wire. However, Cushing et al. teaches of a flange with a power factor test tap (see column 10 lines 32-36), and power factor test tap connected to core by an electrical wire (conducting stud 80 for example). It would have been obvious to one having ordinary skill in the art at the time the invention was made to use the power factor test tap connected to core by wire of Cushing et al. on the flange of Wheeler in order to make power factor test.

15. Claims 8 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wheeler in view of Novel et al. (5220134).

Re claim 8, Wheeler discloses a bushing as set forth in claim 1 above. Wheeler does not explicitly disclose wherein said core has at least one recess for physically-mechanically attaching said housing to said core. However, Novel et al. teaches of a core having at least one recess (17 notches) for physically-mechanically attaching a housing to the core (see column 4 lines 6-8). It would have been obvious to one having ordinary skill in the art at the time the invention was made to use the at least one recess for physically-mechanically attached a housing to a core as taught by Novel et al. on the device of Wheeler in order to make to provide a positive mechanical link.

Re claim 16, Wheeler discloses a bushing as set forth in claim 10 above. Wheeler does not explicitly disclose wherein said core has at least one recess for physically-mechanically attaching said housing to said core. However, Novel et al. teaches of a core having at least one recess (17 notches) for physically-mechanically

Art Unit: 2831

attaching a housing to the core (see column 4 lines 6-8). It would have been obvious to one having ordinary skill in the art at the time the invention was made to use the at least one recess for physically-mechanically attached a housing to a core as taught by Novel et al. on the device of Wheeler in order to make to provide a positive mechanical link.

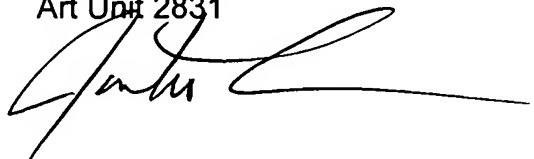
Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jinhee J Lee whose telephone number is 571-272-1977. The examiner can normally be reached on M, T, Th and F at 6:30AM-5PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dean A Reichard can be reached on 571-272-2800 ext. 31. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Jinhee J Lee
Patent Examiner
Art Unit 2831



jjl